

Applicant: Seppo Nissilä
Application Serial No.: 10/735,255
Filing Date: December 12, 2003
Docket No.: 187-73 RCE
Reply to Final Office Action mailed June 30, 2005
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REMARKS

The final Office Action mailed June 30, 2005 has been carefully considered. The Specification has been amended to incorporate subject matter disclosed in Claims 1 and 10, as originally filed, in accordance with MPEP 2163.06, which states that the "claims as filed in the original specification are part of the disclosure and therefore, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 226 USPQ 683 (Fed. Cir. 1985)".

Claims 1-21 were rejected under 35 U.S.C. §112, first paragraph, as not complying with the enablement requirement. The Office Action indicates that the specification does not provide an adequate description of packing the measured heart beat interval information such that the duration of the sound collage is shorter than the time spent for measuring the heart beat interval information. The Office Action further states that the description does not explain how averaging results in a shorter duration of the packed data or how the duration of the packed data is reduced.

A Declaration under 37 C.F.R. 1.132 signed by Mr. Ilkka Tapani Heikkilä is submitted herewith to address the above-identified enablement issue and to establish that the subject application would have enabled one skilled in the art at the time of filing to make and use the invention without undue experimentation.

"The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." MPEP 2164.01. "The invention that one skilled in the art must be enabled to make and use is that defined by the claim(s) of the particular application." MPEP 2164. However, "a patent need not teach, and preferably omits what is well known in the art". MPEP 2164.01.

Regarding Claims 1 and 10, as currently amended, a person's heart beat intervals are measured during a physical exercise and the result of this measurement is stored as heart beat interval information. In paragraph 5 of the Declaration, Mr. Heikkilä states that one skilled in the art would know that if the stored heart beat interval information were played back (all else being equal), its duration would correspond to the duration of the physical exercise, and that if a portion of the stored heart beat interval information were removed and the remaining heart beat interval information were played back, its duration would be less than the duration of the physical exercise.

Pages 20-22 of the publication R. Lee Gordon, *Principles of Operation A Practical Primer*, January 8, 1996, submitted herewith as Exhibit B, discloses averaging as a known technique to reduce the time required for data transmission, which is analogous to playback duration. Specifically, page 20 of the publication describes an averaging technique as dividing a total of 20,000 pings or data points into 200 ensembles of 100 pings each. The publication further states that although data transmission takes time and can slow down ping processing, averaging reduces the time required for data transmission at page 22.

Additional examples of the use of averaging as a well known technique for data compression or packing are provided in U.S. Patent Nos. 6,512,523 to Gross (*Gross*); 6,256,350 to Bishay et al. (*Bishay*); 5,285,281 to Kawamoto et al. (*Kawamoto*); and 4,764,975 to Inoue (*Inoue*), copies of which are submitted herewith as Exhibits C-F. Specifically, *Gross* indicates that "averaging may reduce the information content in the resulting image, but this loss is more than compensated for by greatly reducing the amount of storage space required to store the video images and the amount of bandwidth required to transmit the video images", at column 1, lines 19-24. *Bishay* explicitly states that the steps of the "Cr/Cb domain compression comprises...calculating a single average value for a plurality of Cb locations", at column 9, lines 8-14.

Kawamoto performs compression with an "averaging means for averaging the image data according to the compression write clock", as indicated at column 4, lines 48-61. *Kawamoto* also describes a well-known method of compression using averaging at column 1, lines 14-24. *Inoue* states that compression can be carried out by averaging at column 1, lines 48-63. Thus, it is submitted that averaging is clearly a well-known method for data compression or packing that reduces the quantity of storage resources, such as memory, and the quantity of transmission resources, such as time and frequency (bandwidth), required for the compressed data.

Claims 1 and 10, as currently amended, further indicate that the heart beat interval information is packed, which, as disclosed in paragraph 0014 of the specification, may be performed by averaging, "whereby the heart beat interval data of a given time interval is represented by the mean heart rate of said time". Accordingly, Mr. Heikkilä states in paragraph 7 of the Declaration that one skilled in the art, given the disclosure of the application and that of other publications available to those skilled in the art, such as the patents discussed above, would know that packing the heart beat interval information could be performed by taking an average of "given time intervals" (such as 10-second intervals) of the heart rate interval information (such as heart rate interval information for a 60-minute physical exercise) to yield packed heart beat interval information (or 360 average values).

Paragraph 0033 of the application states that the "packing ratio can be tenfold or hundredfold". In paragraph 8 of the Declaration, Mr. Heikkilä states that since heart rate is typically calculated from heart beat interval information every second, one skilled in the art would know that when averaging is performed on, for example, every 10 seconds of heart rate interval information, the resulting quantity of data is reduced by a factor of ten.

Claims 1 and 10, as currently amended, still further indicate that at least a portion of the packed heart beat interval information is coded into a sound collage, and that the duration of the sound collage is shorter than the time spent for measuring the heart beat intervals.

Reducing the amount of data to playback reduces the duration of playback, as established above. The packed heart rate interval information represents a reduction in the amount of heart beat interval information originally measured, as also established above. Therefore, It follows that that one skilled in the art would know that coding at least a portion of the packed heart beat interval information would result in a sound collage that is shorter in duration when played back than the time spent for measuring the heart beat intervals, as indicated by Mr. Heikkilä in paragraph 9 of the Declaration.

Further, an invention report prepared by the inventor is submitted as Exhibit A. Thus, being a communication from the inventor to a committee that assesses the merits of the invention, this document indicates that the inventor was in possession of the claimed invention prior to the filing date of the subject application and that the concepts disclosed therein, such as that the heart rate file is packed by averaging to yield a file shorter in duration than the original file, were successfully communicated from one skilled in the art, the inventor, to the committee and the attorney preparing the application. Thus, it is respectfully submitted that the application would have enabled one skilled in the art to make and use the claimed invention at the time of filing without undue experimentation.

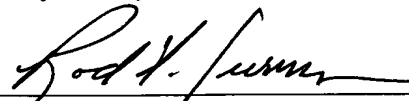
It is also to be noted that claims have been allowed by the Examiner in the corresponding European Application without enablement issues.

Applicant respectfully submits that Claims 2-9 and 11-21, which ultimately depend from Claims 1 and 10, respectively, are patentable over the art of record by virtue of their dependency from Claims 1 and 10, respectively. Further, Applicant submits that Claims 2-9 and 11-21 define patentable subject matter in their own right. Accordingly, it is requested that the rejection of Claims 1-21 under 35 U.S.C. §112, first paragraph, be reconsidered and withdrawn.

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In view of the foregoing amendments and remarks, entry of the amendments to the specification; favourable reconsideration of Claims 1-21; and allowance of pending Claims 1-21 are respectfully and earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rod S. Turner", written over a horizontal line.

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